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Malignant Lymphoma in a Bovine

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hyperresonance over the left lung and dullness over the right lung, especially the lower borders. An expiratory dyspnea was present. Rumen movements were weak and irregular. The organ appeared to be packed with ingesta.

Blood studies showed a marked anemia with the red blood cell count about two-thirds that of the normal amount. The white blood cell count was low with the ratio of mature to immature neutrophils almost reversed. Exploratory puncture of the right pleural cavity yielded a thin, foul smelling, yellowish brown exudate upon aspiration with a syringe.

An area over the right third to fifth intercostal space along the ventral border of the lung was clipped, shaved and disinfected. A 12 gauge, 2 inch needle was introduced into the pleural cavity and about one thousand cubic centimeters of pus was drained out. About 5 inches of plastic tubing was inserted through the needle and into the pleural cavity until fluid pus again began to flow out. An additional 500 cc. of exudate was removed. One thousand cubic centimeters of saline was injected into the pleural cavity. This fluid, mixed with pus, was drained off with a 20 cc. syringe and a 14 gauge, 4 inch needle. Twelve million units of penicillin and 4 Gm. of streptomycin were instilled into the pleural cavity.

The following day the animal seemed to be breathing easier and respiratory sounds could be heard on auscultation over almost the entire right lung. Two million units of penicillin and 2½ Gm. of streptomycin were administered intramuscularly.

On the second day post operative the patient seemed to have more difficulty breathing. Two million units of penicillin and 2½ Gm. of streptomycin were again administered intramuscularly.

On the third day after drainage of the thorax another exploratory puncture was made along the lower border of the right lung at the eighth intercostal space. Pus was aspirated, so a cannula was introduced into the pleural cavity at this point. Several pints of exudate were removed. Twenty five hundred cubic centimeters of

saline were injected into the pleural cavity and removed. Six million units of penicillin and 3 Gm. of streptomycin were mixed with 250 cc. of saline and introduced through the cannula. The cannula was then removed.

The following day an attempt was made to introduce a permanent drainage tube into the pleural cavity but no pus could be withdrawn through the cannula. Saline could not be injected through the cannula, so 2,000,000 units of penicillin and 3 Gm. of streptomycin were infused and the skin incision was closed with one suture.

Two days following the unsuccessful attempt to introduce a drainage tube the animal was given 2,000,000 units of penicillin and 2½ Gm. of streptomycin intramuscularly. Two days later the temperature of the animal was near normal, she was eating and respiration was greatly improved. The animal was discharged with a very guarded prognosis because of the possibility of more abscesses and pus remaining in the thoracic cavity. If much of this material were still present in the thoracic cavity, it could easily lead to a pyemia, septicemia and death of the animal.

Charles Sheldon '56

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Malignant Lymphoma in a Bovine. On July 20, 1955, a 7-year-old Holstein cow was admitted to the Stange Memorial Clinic at Iowa State College, as a possible "hardware" suspect. The patient was badly bloated at the time of admittance. Rectal examination indicated a marked enlargement of the inguinal lymph nodes and right kidney. The blood count of the animal indicated a marked leucocytosis, 25,680. The differential count revealed 16,900 lymphocytes, 4,700 stabs, 3,800 segments and 200 monocytes.

A laparotomy was performed and tum-

* Clinical

(continued on page 28)



Above: A hematoma of the penis of a Hereford bull. A portion of the sheath is prolapsed and the bull was unable to extend his penis. Since the prognosis is poor the owner marketed the animal.

* Clinical

(continued from page 27)

erous enlargements were found along the rib cage and throughout the mesentery. Euthanasia of the animal was advised.

Post mortem examination revealed extensive involvement of the visceral lymphnodes and diffuse infiltration of the wall of the abomasum.

A diagnosis of malignant lymphoma was made.

Virgil Bohnenkamp '56

Mash containing a high percentage of oat hulls does not seriously affect egg production of laying hens provided it is fed in the pelleted form, according to Dr. H. R. Bird of the U.S.D.A. However, the same mash, fed in unpelleted form causes a serious drop in production. Pelleting mash reduces the bulk, enabling hens to eat enough to maintain egg production with only slight losses in body weight.

THE INFLUENCE OF COBALT ON THE ACTION OF ANTIBIOTICS.

In vitro, results presented indicated that cobalt enhances the antibacterial effectiveness of penicillin, streptomycin, and bactitracin against *Micrococcus pyogenes* var. *aureus*. There was no benefit noted when cobalt was combined with oxytetracycline, chlortetracycline, chloramphenicol or polymyxin. In a tube dilution method, cobalt reduced the inhibiting level of a combination of penicillin, streptomycin, sulfasoxazole, and sulfathiazole from two to tenfold against *Micrococcus pyogenes* var *aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, and *Aerobacter aerogenes*, all organisms isolated from clinical mastitis.

[Trace, J. C. D.V.M.; Edds, G. T., D.V.M., Ph.D. The influence of cobalt on the action of antibiotics. American Journal of Veterinary Research 15: 639-642. (October) 1954.]